example, competitors have captured over 30% of the market since toll parity was implemented in February 1996.

C. Increasing the Competition in InterLATA Services

The argument for why BOC entry would increase competition in interLATA services rests on three premises. First, interLATA markets exhibit imperfect competition. Second, the BOC is uniquely positioned to offer increased competition (otherwise other entrants would do just as well). Third, BOC entry indeed would bring such competition.

1. Competitiveness of interLATA markets

- 91. The extent of interLATA competition is hotly contested BOCs and their experts characterize it as "anemic" and "tacit collusion" while IXCs portray it as "robust" and "intensely competitive "2". It is helpful to review some salient points.
- Market Structure. Supply of interLATA services is quite concentrated in 1995, AT&T accounted for about 53% of revenues, MCI for 18% and Sprint for 10%. On the other hand, concentration has declined considerably since divestiture (when AT&T's share of market revenue was over 90%) and is continuing to decline. Four carriers have national networks (AT&T, MCI, Sprint, and WorldCom) and at least one more national network is being assembled, many carriers have regional networks; and there are hundreds of resellers. The market share of carriers other than AT&T, MCI and Sprint has grown from under 12% in 1991 to over 19% in 1995, 28 and, as the FCC observed in October 1995 when finding AT&T non-dominant, these carriers exert considerable competitive discipline. Nevertheless, the growth of independents is in theory consistent with supracompetitive ("umbrella") pricing by the majors. In gauging competition therefore one must, as usual, look beyond concentration and other aspects of market structure and examine performance.

For a sampling of the contrasting views compare Paul W. MacAvoy, The Failure of Antitrust and Regulation to Establish Competition in Long-Distance Telephone Services, MIT Press and AEI Press 1996, with Douglas B. Bernheim and Robert D. Willig, The Scope of Competition in Telecommunications, AEI Studies in Telecommunications Deregulation, Working Paper, October 1996, 84-85, forthcoming, MIT Press and AEI Press.

FCC, Statistics of Communications Common Carriers, 1995/96, Table 1 4

93. Performance. Crandall and Waverman (1995, chapter 5) survey the literature on interLATA competition and remark: "... existing studies... are not particularly convincing and do not lead to a single conclusion" (p. 165). This literature has generated so much heat but remarkably little light for reasons of data limitations²⁹ and methodological problems.³⁰ Crandall and Waverman perform additional analysis using interLATA intrastate data, which offers more observations than interstate data (there are 38 multi-LATA states but only one national jurisdiction), and more sophisticated estimates of quantities. They find that between 1987 and 1993 prices fell much more than access charges, prices net of access fell 4% per year by one estimate (pp. 156-7). Moreover, the data used (tariffs, for peak period, switched five-minute calls) fail to capture the impact of various discount plans. Finally, while falling prices could be due to non-competition factors, such as technological cost-reductions, there are other signs of increased competition. Notably, the narrowing of dispersion in prices of calls (a) across states for a given distance, and (b) across different distances suggests that competitive pressures are pushing prices to more closely track costs (pp. 151-3).

Available price data generally reflect published tariffs ("posted prices") not actual transaction prices, the discrepancy between these is large and growing due to increasing use of discount plans. Recovering average revenue data per minute from published figures on total revenues is complicated by the absence of accurate data on quantities—the number of minutes of network use. More and more usage minutes of large business customers are unswitched (private lines, virtual private networks) or switched only at one end (WATS, 800 calls), and therefore are not captured in conventional statistics on use of the public switched network. Comparing trends in telephone rates measured by Bureau of Labor Statistics (that use tariffs not transactions prices), Crandall and Waverman (pp. 133-6) observe: "The temporal patterns... are so wildly inconsistent that they cast doubt on the validity of any of these data." For example, from 1986-93 there was an apparent acceleration in the degree of competition and rate declines, yet reported growth of network use slowed markedly

For example, the widely cited study by Taylor and Taylor (American Economic Review Papers and Proceedings, May 1993) which finds that AT&T's rate reductions have been less than the reductions in its access costs mandated by the FCC, uses not actual data on AT&T's price reductions but projected reductions; such ex ante calculations "are suspect" and "unreliable." (Crandall and Waverman, "CW," 130, 168-9). A study by MacAvoy purporting to find tacit collusion among the three largest IXCs (Journal of Economics and Management Strategy, 1995) uses tariffs, not transactions prices; and it includes in IXCs' long run incremental cost net of access charges (LRIC) only "incremental operating expenses incurred for transporting switched calls," estimated by the WEFA group to be 1 cent per minute; all sales and administrative costs are left out. The much touted WEFA study that projects \$490 billion in savings to consumers by 2003 from BOC entry assumes among other things: the above LRIC figure of 1 cent; that existing IXC competition is characterized by a simple Cournot model with equal sized firms; that adding a fourth player in a region—the BOC—would decrease rates by 50%; and that these price declines would stimulate the overall economy and add 3.6 million additional jobs over the next ten years. (CW, 169-70.)

94. Crandall and Waverman's overall assessment is that the interLATA market displays "considerable competition" that is "more vigorous than that predicted by the Cournot model" (p. 163) and that "has been effective in reducing prices" (p. 132). However, they add that "(interLATA) markets are not fully competitive so that further entry would be of real value" (p. 132). I share this overall assessment. Allegations that interLATA price competition is nonexistent defy common sense if there is no competition, why do so many customers switch back and forth between carriers each year? More likely, of course, is that there is considerable competition not captured in published price data, such as the familiar \$50 or \$100 checks as inducements to switch between carriers. On the other hand, though competition exists and is increasing, 32 there is surely room for more competition. 33

2. BOC Advantages over other long-distance entrants

95. A BOC in its region enjoys significant efficiency advantages over other potential entrants into long-distance services. It stretches credulity to argue—as some have—that a BOC has nothing uniquely positive to offer, for example, that if it leases others' facilities to provide long-distance services then it is no different from the hundreds of existing resellers.

A BOC's reputation and established billing and customer service arrangements with local subscribers would enable it to market long-distance services more effectively than could other entrants. A BOC would be especially well placed to address lower-volume customers. First, billing and other "fixed and common costs" of serving a customer are relatively large compared to the revenue from low-volume customers, and a BOC already incurs most of these costs in providing local

In 1994, 19 million customers (20% of all customers) changed carriers 27 million times. In 1995, customers changed carriers over 42 million times, and the 1st quarter of 1996 saw an even faster pace. Peter K. Pitsch, "The Long Distance Market Is Competitive," Pitsch Communications, September 3, 1996, p. 2.

Merrill Lynch, Telecom Services — Long Distance, November 13, 1996. John J. Keller, "AT&T Results Hit by Cost of Changing Marketplace." Wall Street Journal, October 18, 1996 ("cutthroat competition in long distance services").

The publicized flat-rate plans recently offered by major IXCs, such as Sprint's 10 cents per minute at off peak times and AT&T's 15 cents per minute any time, do suggest increased competition; but they also call into question previous claims that the market was intensely competitive already

service. Second, low-volume customers are often reluctant to switch from a major IXC to an unfamiliar vendor, and a BOC in its region is often the only carrier with a comparable reputation to those of the major IXCs.³⁴ These advantages which would render the BOC a powerful retailer of long-distance services also enable it to obtain wholesale long-distance capacity from IXCs at unusually low prices, further increasing its cost advantage over other potential entrants into retail long-distance services.

3. How much competition will BOC entry in fact add?

The flip side of the BOC's unique advantages, however, is that the BOC may not feel compelled to pass through most of its competitive advantages to consumers. For example, a BOC may elect to pass on to consumers only a fraction of the unusually large discounts it obtains from IXCs on wholesale long-distance capacity. The degree of pass-through is important it not only influences the distribution of gains between the BOC and consumers, but also influences the degree to which long-distance calling volume will increase, which in turn affects the gains to society from BOC entry. Precisely how much a BOC's entry will (a) lower prices or (b) largely reshuffle profits from IXCs is an open question. Those who argue that BOC entry will greatly lower prices by increasing competition must explain why—if the long-distance market is far from competitive despite the presence of several major IXCs—adding one (albeit potent) competitor in the state would radically alter matters.

98. In my opinion BOC entry would not yield as dramatic an increase in competition as some claim, in part because of the rapid increase in competition that is already occurring.³⁶ Nevertheless.

These unique BOC advantages in retailing would yield benefits from BOC interLATA entry even if there was perfect competition in interLATA services, because they allow a BOC to realize various efficiencies (discussed earlier) from joint provision of local and interLATA services. However, if interLATA competition is seriously imperfect and if BOC entry would substantially increase this competition, then the value of such entry is magnified, because it also serves to correct a competitive distortion.

Benefits from joint provision of local and long-distance services (cost savings or new services—see section A) will endure even if long-distance calling volume does not expand; but the focus here is on the added gains from increased long-distance competition.

Merrill Lynch, Telecom Services—Long Distance, February 14, 1997, reports that increased supply of long-distance capacity has led to "very competitive bidding in the wholesale market" and that the resulting stiffer competition from entities that benefit from this steep resale discount—independent LECs, resellers, dial around

some further price declines can be expected from BOC entry. Still greater benefits are likely from joint provision of local and long-distance services (cost savings, availability of new integrated services), whose advent would be delayed by delaying BOC interLATA entry. However, authorizing BOC interLATA entry before the local market has been opened to competition also carries competitive risks, to these I now turn.

III. Potential Competitive Concerns Raised by BOC Entry

99. Section A below discusses more comprehensively the various practices a BOC might employ against long-distance carriers or local entrants, and section B why BOC incentives to do so will increase post entry. Section C addresses whether BOC entry would be inefficient solely because BOC access prices to IXCs, with whom BOCs would compete, are well above BOC costs of providing such access

A. Anticompetitive Practices: Access Discrimination and Exclusionary Pricing

100. In various ways, both long-distance carriers and local entrants depend on good access to a BOC's ubiquitous local network. Control of these vital local inputs gives a BOC an unusual ability, if unchecked by regulation, to engage in anticompetitive practices. It is useful to distinguish between exclusionary practices that involve non-price terms of access to a BOC's facilities ("access discrimination") and those that involve prices—because the welfare effects of the two sets of practices can differ, as can the incentives to engage in them

1. Access discrimination

101. Types of practices. A BOC could impede the ability of rivals to compete by misusing its control of the local network in various ways. It might raise competitors' costs, for example, by imposing unnecessarily costly requirements for network interconnection or providing them inferior support or maintenance functions. Increasing competitors' costs induces them to raise prices and

companies and pre-paid calling cards—has forced the larger IXCs to pursue more aggressive pricing tactics. As an example, AT&T has begun offering 10 cents per minute anytime, anywhere with a \$5 monthly fee, or without any fee for calls at off-peak times. John J. Keller, "Best Phone Discounts Go to Hardest Bargainers," Wall Street Journal, February 13, 1997, B1.

thereby indirectly diverts retail sales from competitors to the BOC or its affiliate. A BOC might also divert demand away from competitors and towards its affiliates directly, without forcing them to raise prices. This might be done by degrading competitors' quality, such as by foot-dragging in providing new access arrangements, or by appropriating competitively sensitive information about customers obtained in the course of supplying rivals with bottleneck inputs. I will label all these non-price methods to weaken rivals—both in long-distance and in local services—under the general rubric of "access discrimination."

102. Inefficiencies. Access discrimination is a particularly inefficient form of rivalry. Raising competitors' costs is directly harmful, even if it does not lead to higher prices. In fact, prices are likely to rise, this both harms consumers, and creates additional social losses from output reduction Degrading competitors' quality too is directly inefficient, harming both competitors and consumers. In addition, these practices and the misappropriation of competitively sensitive information could—by weakening competitors or discouraging entry—reduce the variety of products available the other innovations that competitors might bring to a market. These inefficiencies will be borne by both competitors and consumers.

2. Over-pricing of inputs

103. Overpricing of inputs needed by competitors, or of outputs that are complementary to those sold by competitors, also is inefficient. The social harm here occurs not because of the high prices themselves but because these high prices inefficiently reduce the quantities purchased. However, setting prohibitively high prices for bottleneck inputs, such as call termination, is tantamount to refusing to supply such inputs and thus can create inefficiencies of comparable magnitudes to those under access discrimination. Steep overpricing of inputs can be seriously anticompetitive even well short of complete exclusion of rivals: by greatly inflating rivals' costs, it can artificially and significantly depress their market presence.

3. Under-pricing of outputs

104. BOC entry conceivably could stifle competition also by giving the BOC a new instrument—charging artificially low prices for long-distance services. The arguments can be usefully grouped into three categories, that differ in their plausibility and welfare effects.

- 105. The first is *predatory pricing* or variants thereof: a BOC would set prices temporarily low in order to stifle competition and subsequently raise prices.³⁷ Economists are somewhat skeptical of predation arguments, especially when some rivals are well-financed corporations such as the major IXCs, absent regulatory cross-subsidy.
- 106. The second argument invokes such cross-subsidy. A BOC may set an artificially low price that could be profitable to the BOC whether or not price can be subsequently raised in the targeted market; such behavior could be profitable because it entails cross-subsidy from the BOC's regulated activities. As such, it also is inefficient. Section B.1.a below addresses this argument, concluding that cross-subsidy incentives are likely to be weaker for the BOCs today due to increased reliance on price caps and other "incentive regulation"
- 107. The third argument does not invoke predation or cross-subsidy, but a *price squeeze* Because a BOC charges IXCs access prices well above its costs, it has an artificial advantage in competing with IXCs for long-distance services. This argument is evaluated in section C.

B. Why BOC Entry Increases Anticompetitive Incentives

108 It is helpful to distinguish anticompetitive incentives driven by attempts to circumvent regulation of price or profit, from incentives that do not hinge on the presence of regulation.

1. Regulatory Evasion

a. Cost misallocation ("cross-subsidization")

109. Incentives and methods. Traditional U.S. regulation of public utilities, including local telephone companies, was known as cost-of-service or rate-of-return regulation, because prices were intended to offer the firm a reasonable opportunity to cover its costs including a fair rate of return on capital. A firm whose prices are regulated in such a manner and which also has unregulated (or more lightly regulated) operations in competitive markets will have incentives to shift profit from the

For instance, some have argued that a BOC could use low prices of long-distance services to stifle not only long-distance competition but also *local* competition. A BOC's prices for many local services are likely to be regulated but not its long-distance prices; by marketing complex bundles of both services a BOC might offer targeted discounts through its long-distance prices to those local customers most vulnerable to competition. The greater complexity of detecting and proving predatory pricing when part of a complex bundle of services might help the BOC escape antitrust scrutiny of such pricing.

regulated to the unregulated side: the higher profit earned by unregulated operations flows directly to shareholders, while the lower profit of the regulated side allows it to "justify" requests for higher allowable prices. Such profit shifting can occur by misallocating various costs of the unregulated entity to the regulated one, behavior more commonly known as "cross-subsidization." ³⁸

- 110. Anticompetitive effects. The incentives to engage in cost misallocation stem from a desire to circumvent regulation; but such behavior can have incidental effects of distorting competition. Overpaying an affiliate for its services artificially favors it in competing for sales to the regulated side; misallocating the affiliate's costs to the regulated side (and thus ratepayers) favors it in competing for outside customers by artificially reducing its costs and thereby allowing it to set artificially low prices. These competitive distortions mean that winners are no longer determined on the merits. 39
- misallocations, regulators often subject firms to detailed accounting safeguards and sometimes require that unregulated, competitive activities be undertaken through separate subsidiaries. Section 272 of the Act imposes such requirements on BOCs wishing to offer long-distance services. Although such safeguards have some bite, it is widely acknowledged that they have not eliminated cost misallocation in the past, and it is naive to believe they could do so in the future if the firm has strong incentives to engage in cost misallocation

These cost misallocations can involve purely accounting manipulations, such as mischaracterizing costs attributable to the unregulated side as "joint and common" to both operations; actual payments, such as overpaying the unregulated affiliates for services or assets they provide or undercharging them for services or assets provided to them, or real resource misallocations, such as selecting production methods that are not cost-minimizing but display more common costs that can then be misattributed. Misallocating revenues of the regulated operation to the unregulated one is conceptually similar, as it leaves the regulated side with a greater deficit which can be used to defend requests for rate increases. I prefer the term "cost misallocation" to cross-subsidization because the latter is sometimes wrongly taken to require that the price of the unregulated service must be below marginal cost. As the preceding examples indicate, the phenomenon is more general.

Additional inefficiencies arise quite aside from the distortion of competition in the unregulated markets. First, prices increase to consumers of the regulated products. Second, any real resource misallocations are directly costly, for example, biasing the choice of production methods towards ones that entail excessive common costs. Finally, even if prices of unregulated services fall (which they need not do, e.g., if the cost misallocation involves only fixed and not variable costs), they would be artificially below cost, causing consumption of unregulated services to be excessive.

- 112. Price cap regulation. Importantly, however, the BOCs argue that incentives to misallocate costs no longer exist because in recent years the FCC and state commissions have moved from traditional cost-of-service regulation towards pure price-caps, that sever the link between a firm's allowable regulated price and its costs. Cost misallocation then loses its purpose, because higher reported costs for the regulated side no longer yield higher prices.
- 113. These claims overstate the extent of the regulatory changes, for two reasons. First, traditional regulation exhibited some lag between rate cases, during which period prices were not continuously adjusted towards cost. Second, today's regulation does not—and cannot— amount to pure price caps. Price caps can never be pure, but are periodically revised. In addition, some schemes of "incentive regulation" do not involve price caps, but require adjustment of prices to share profits (or losses) with consumers once profits are outside certain specified bands. Therefore, a regulated firm's allowable future prices will ultimately depend on its past costs, which re-introduces some incentives to engage in cost misallocation.
- Nevertheless, these regulatory changes do seem to have markedly altered BOCs' incentives. The BOCs have embarked on aggressive cost-cutting programs, which financial analysts and others attribute to the regulatory changes. These efforts suggest the BOCs assign some credibility to the new regulatory promises. But in that case, they also would not seem to have a strong basis for counting on regulators to allow rapid price increases beyond stipulated levels in response to increased costs due to cost misallocation (or other reasons). In short, incentives to engage in cost

Pure price caps would establish a permanent formula for determining the firm's maximum allowable prices at all future dates, based on initial forecasts of the firm's attainable costs (and perhaps indexed to variables that influence costs but lie outside the firm's control, e.g., the overall inflation rate); allowable prices would not be revised in light of the firm's actual cost realizations. But in practice, revisions will necessarily occur. One reason is forecasting errors: if regulators underestimate the firm's true costs and stick to the allowed prices, the firm will go bankrupt; if they overestimate costs, the firm will earn large profits that invite strong political pressure to lower allowable prices. Another reason for revising price caps is the introduction of new services, if these services are to make a contribution towards covering the firm's fixed and common costs. In light of all this, it is not surprising that the FCC and most if not all states have already revised their initial formulas.

See, for example, Merrill Lynch, Telecom Services—RBOCs & GTE, Second Quarter Review, August 9, 1996.

Moreover, regulators are especially protective of important customer classes for which local competition is likely to develop more slowly, such as rural and low-volume residential customers. They would thus be

misallocation are certainly more attenuated today, which also serves to lower the risks of the BOCs engaging in anticompetitively low pricing.

b. Leverage incentives due to asymmetric regulation

- 115. A different and more serious anticompetitive incentive involves leveraging of market power from the price-constrained bottleneck to adjacent, unregulated markets, by engaging in the myriad forms of (non-price) access discrimination. As was explained in section I.D.2, incentives for leverage stem in large part from asymmetric regulation: the firm's prices for bottleneck services are regulated, but its prices for other services that rely on the bottleneck services are not regulated (or less tightly regulated). Here it is worth clarifying a few points.
- 116 First, contrary to some claims, access discrimination is not costless to a BOC since it reduces BOC input sales to the targeted carriers ⁴³ Nevertheless, a BOC generally will have some incentives to attempt access discrimination if it is selling unregulated services that compete with those offered by firms that depend on its regulated inputs. And unfortunately the more stringent is price regulation of the firm's bottleneck inputs, i.e., the more "successful" is price regulation, the stronger is the incentive to attempt access discrimination.
- 117. Second, § 272's requirement that a BOC sell its long-distance services only through a separate affiliate by itself does little to dilute a BOC's incentives to attempt access discrimination against the affiliate's competitors (e.g., IXCs)—because the affiliate's and parent's profits accrue to common shareholders. Regulators can dilute the common interests of a firm's different units by imposing further requirements, e.g., that managers be rewarded based only on the performance of their units, not of the overall firm; they also can attempt to block avenues of discrimination. But to eliminate all incentives and ability to favor affiliates would require eliminating all commonality of interest

especially reluctant to allow price increases in these "monopoly" segments due to cost misallocation from the relatively competitive segments.

The firm must compare this revenue loss with the increased profits from selling its unregulated services. For example, the tradeoff is worse when: (1) its services are poorer substitutes for those of rivals, because a smaller fraction of rivals' lost output and thus access revenue is offset by increased demand for the firm's own services; and (2) the firm's ability to expand sales of unregulated is constrained, by capacity limits or other factors.

(including via personnel rotation or central oversight) and sharing of resources. This would require not separate affiliates but separate firms.⁴⁴ Thus, as long as a BOC is subject to asymmetric price regulation, incentives will persist to attempt access discrimination for purposes of leverage.

118. Finally, it is worth stressing that motives of leverage into integrated services—once a BOC has secured interLATA entry and thus may offer also integrated services—would drive a BOC to reduce cooperation not only in providing access for long-distance services, but also for the host of new wholesale local services needed by integrated-services competitors and called for by the Act

2. Protecting the core local market

a. Reduced cost of harming IXCs to delay their local entry

Through access discrimination, a BOC may be able to damage the IXCs' reputations in its region and reduce their customer base, thereby also delaying their entry into its local markets. Long-distance entry lowers a BOC's cost of pursuing access discrimination, because while the BOC loses access revenue due to reduced sales of IXCs, some of these reduced sales are now diverted to the BOC's affiliate instead of being lost altogether. 45

b. Reduced incentives to cooperate with local entrants

120. Finally and importantly, a BOC's incentives to cooperate with local entrants would be inadequate even putting aside leverage motives into adjacent markets (as would be relevant if integrated services were unimportant, and if regulation could perfectly prevent access discrimination against IXCs). Like any dominant incumbent a BOC is inclined to resist entry, because dominance

As a matter of logic, it will be impossible to eliminate all potential avenues of discrimination without also vitiating economies of scope—in which case requiring separate firms would seem preferable to awkward regulatory quasi-separation within a firm. There is no perfect way out of this dilemma; the hope is to block the main avenues of harmful discrimination without unduly foreclosing efficiencies.

This is the same as the logic underlying discrimination incentives for purposes of leveraging the price-regulated local access monopoly into higher long-distance prices (see B.1.b above). But the purpose here is not to raise price in long distance, rather, to delay entry by IXCs into the local market; hence the argument does not hinge on the BOC being able to offer unregulated long distance services or any other form of asymmetric regulation. Note that this was not an issue at divestiture, as local monopoly was protected by state franchises.

the BOC could value entry authority into long distance; for example, its strong brand name locally and ability to realize cost savings through joint retailing functions could allow it to earn profits in long distance (section II.C). Therefore, to receive long-distance authority it would be willing to extend some cooperation to local entrants. Granting such authority before the local market is open, however, will prematurely reduce the BOC's incentives to continue cooperating in opening its market.

C. Artificial Cost Advantage in Competing for Long-Distance Services

advantages in competing for long-distance business because their access prices to IXCs are well above cost ⁴⁷ The IXCs are right that even if imputation rules required a BOC to charge its affiliate the same access price as it charges IXCs, an affiliate would treat such a price as merely an internal transfer, and would try to base its retail prices on the true cost of obtaining access. ⁴⁸ A BOC's

This requires only that price regulation not be capable of reducing prices perfectly to cost, hardly a stringent assumption. Perfect "global price-cap" regulation might in theory eliminate incentives to discriminate against competitors. See Jean-Jacques Laffont and Jean Tirole "Creating Competition through Interconnection. Theory and Practice," February 1996, forthcoming in Journal of Regulatory Economics, and "Global Price Caps and the Regulation of Interconnection." July 1996 But in practice price caps are never pure, so allowing entry is likely to end up hurting the firm by ultimately contributing to the tightening of price caps. It is true that the incumbent's incentive to cooperate with output-market competitors may well be greater if it could sell to them the inputs they require at unregulated rather than regulated prices. But even then, the incentive is likely to be inadequate. Once competition is established, it limits the ability to extract profits from customers, it is highly unlikely—for reasons involving contracting problems or antitrust—that the incumbent could collect sufficient profit through overpricing of inputs to competitors initially to offset these lost future profits. Predictably, dominant incumbents often resist entry into their markets.

Responses to Joel Klein letter by AT&T (p.21), MCI (pp. 9-10), Sprint (p.3), December 1996. The FCC's recent actions on access charges and price caps, while helping to bring down access charges, do not purport to bring them down to cost and in fact are likely to leave them well above costs for some time. Moreover, intrastate access charges, which now typically exceed interstate charges, will remain under the jurisdiction of state commissions and considerable uncertainty remains about their levels. Thus, the issue raised by the IXCs remains pertinent.

The IXCs are implicitly assuming that imputation rules would not be capable of seriously constraining a BOC affiliate's retail prices. This assumption is probably realistic, given the difficulties of comparing the other relevant variables necessary to conduct an imputation test. (The test prohibits: $p \le c + w + d$, where p is the affiliate's retail price, c the affiliate's cost of non-bottleneck inputs, w the input price to its rival, and d the firm's extra cost of providing the bottleneck inputs to the rival than to the affiliate. In practice, estimating c and d can

affiliate would then be able to undercut IXCs' prices selectively to certain customers and capture such business even if it is inherently less efficient than IXCs

122. The IXCs' argument is correct as far as it goes. But it overlooks the fact that selective discounts by a BOC could well increase total long-distance output and benefit consumers. One must be clear about the alternatives being compared. Assuming that access charges by BOCs to IXCs would be no higher if BOC entry is authorized than if it is not, an assumption discussed below, a BOC's ability to offer selective discounts should increase total long-distance output and benefit long-distance consumers, as compared with barring BOC entry. (This assumes that BOC entry does not induce IXCs to exit the market as a result of being unable to profitably operate at a reduced scale, if exit does occur, a BOC may be able to raise price.) The basic reason is that IXCs' cost has not increased—because by assumption access prices are no higher—but a new competitor (the BOC) enjoys lower cost of serving the long-distance market (albeit artificially lower, because it charges to IXCs access prices well above its own incremental cost of providing access, while basing its own retail pricing behavior on the latter).

123. The assumption that regulation will prevent a BOC from subsequently raising access prices to IXCs (or failing to lower them as much as would otherwise have occurred) is important, however In particular, there are dangers of regulating access pricing by including in a common basket both access services "sold" to the BOC's affiliate and to IXCs and subjecting the basket to an overall price cap. By lowering the price to its affiliate a BOC would then be allowed to raise prices to IXCs while adhering to the cap; the BOC gains, of course, since the additional profits earned by its affiliate are unregulated. Thus, a BOC will have strong incentives to try and give its affiliate preferential discounts, in order to justify raising the access prices charged to IXCs.

be especially problematic, even agreeing on the relevant services to be used when comparing w and p can be contentious.) Moreover, there is a general question about the wisdom of zealously enforcing any price floors. Such policies can easily stray from protecting competition to protecting competitors.

Observe that the concern is not with the BOC raising the access price or engaging in access discrimination against IXCs, but with reducing its retail price given that access to IXCs is priced above cost

- BOC may plead "nondiscrimination" by designing discounted offers that are nominally available to all but are targeted to its affiliate. It can make discounts conditional on terms that (a) are alleged to provide cost savings and (b) are contrived such that the affiliate is more likely to accept, for example, a buyer's agreeing to make very long-term purchase commitments. The scope for such gamesmanship can be reduced by having separate price caps for access services sold to competitors and to affiliates. And in general, if competitively significant "nondiscriminatory" discounted offers are disproportionately accepted by affiliates, some scrutiny may be warranted of whether discounts reflect genuine cost savings. 51
- In sum, I would be reluctant to advocate delaying a BOC's interLATA entry solely on the grounds that its access prices to IXCs are currently well above its incremental cost—as long as the BOC can adequately be prevented from raising access prices to IXCs post entry. ⁵² It is certainly true, however, that the best course is to reduce access charges closer to cost. Assuming that (non-price) access discrimination could be prevented, reducing access prices would both expand downstream output and prevent distortion of competition.

Of course, discounts for long-term commitments can reflect legitimate business reasons. In the guise of such reasons, however, one also could contrive contracts of such long duration and such stringent terms for breach that only an affiliate would feel comfortable accepting. An affiliate would realize that if changed circumstances made it efficient to breach its commitment, it would be allowed to do so (in the interest of maximizing overall firm profit) far more readily than would an outsider such as an IXC. A BOC also might try to rationalize discounts based on the percentage of a long-distance carrier's minutes committed to the BOC. An IXC might value the option of flexibility, such as splitting its minutes between a BOC and a CAP (especially if CAPs continue to expand), while a BOC's affiliate would far more readily accept exclusivity with the parent.

Unfortunately, it is not easy to police against true price discrimination when buyers require significantly different arrangements, leading to potentially different costs of service. See, for example, Marius Schwartz. "The Perverse Effects of the Robinson-Patman Act." Antitrust Bulletin, 31 (Fall 1986), 733-757.

Authorizing BOC entry, of course, does not foreclose subsequent antitrust action if price squeezes are deemed to be anticompetitive

IV. The Ability of Regulatory Safeguards to Negate Concerns Raised by BOC Entry

are access discrimination against long-distance carriers and, especially, the withholding of cooperation in implementing and pricing appropriately the various new wholesale local services. How serious these potential concerns in fact are depends on how effectively and expeditiously they can be addressed by regulatory and other safeguards. Section A below discusses generic shortcomings of regulation, showing by implication that there is real value to having a BOC be more disposed to cooperate than having to rely exclusively on forcing its cooperation. Nevertheless, while never perfect, regulatory and other safeguards are far more adept at preventing degradation of established access arrangements than at forcing implementation of new arrangements, this difference has key implications for the design of a pro-competitive standard for BOC entry (see section V). Sections B and C document this difference drawing on past experience with LEC behavior

A. Generic Shortcomings of Regulation, and Existing vs. New Arrangements

127. Regulation faces several inherent shortcomings in trying to curb a firm's incentives to discriminate against competitors, which caution us against relying on it exclusively.⁵³

1. Generic shortcomings of regulation

128. Detecting abuses. In order to be effective, regulators must be able to detect a violation. This requires knowing, among other things, what the firm actually did (not what it claims) and often what alternatives it could have pursued. Outsiders such as regulators, courts, and even competitors possess vastly inferior information than the firm about its business environment and conduct. And while a regulator can learn a great deal by consulting with interested industry parties, to eliminate the informational disadvantage entirely the regulator would have to become the firm.

For good discussions of the limitations of state and FCC regulation prior to the 1996 Act, see the December 1994 Declarations of Nina W. Cornell (focusing on state regulation, especially pp. 35-63) ("Cornell, 1994") and of Daniel Kelley (FCC regulation, especially pp. 37-75) opposing the motion by four BOCs to vacate the MFJ Unites States of America v Western Electric Company. Inc. and American Telephone and Telegraph Company, United States District Court for the District of Columbia. Civil Action No. 82-0192.

- 129. Proving abuses. Detecting a violation is not the same as being able to prove it. Regulated firms enjoy—for good reasons—procedural safeguards including the right, which they often exercise, to challenge regulatory decisions in court. A non-specialist court is likely to be less informed about conditions in the industry than is a regulator, and the adversarial court proceedings offer the better-informed firm ample opportunity to raise various objections. Thus, even if a regulator is convinced there is a violation, proving it to the standard needed to take corrective action may be too costly or simply not feasible.
- 130. The issue of proof is important. The BOCs have repeatedly argued that preventing discrimination is easy because a service difference great enough to influence the behavior of customers assuredly would be detected by competitors and by regulators. However, simply showing such a difference is not sufficient to prove a BOC has discriminated, especially with new or customized arrangements—there could be "innocent" explanations with a sufficient ring of plausibility (different circumstances of transactions, events beyond the firm's control, etc.). Indeed, a major advantage of competition over regulation in taming market power is that a competitor is not constrained by the same rules as a regulator if a competitor believes the incumbent's price is excessive or its service is inferior it can simply offer customers better options—without having to prove to anyone that the firm is misbehaving
- 131. Deterring abuses. Effective deterrence requires the expected penalty to exceed the expected gain from engaging in an abuse. The requisite penalty may have to be large given (a) the potentially large gains to a firm and (b) the limited chance that a violation will be detected and proved, hence that the penalty will be imposed. Regulators may not always have the legal rights or the political ability to impose penalties large enough to achieve meaningful deterrence. Imposing high penalties is especially problematic when violations are not demonstrably blatant, as is likely with new (as opposed to established) access arrangements.
- 132. Correcting abuses. Since deterrence will not be perfect, a regulator also must be able to rectify the effects of abuses quickly and effectively. But the damage to a competitor imposed, for example, by technical discrimination can be difficult to reverse, discrimination may have allowed the regulated firm to beat the rival to market with a new product. This first-mover advantage could have

a durable impact, for example, if consumers would have to incur significant switching costs should they wish to move to the entrant. (For this reason, the Act tries to minimize these costs through such means as requiring number portability.)

133. Cost-effective regulation. Finally, regulation would have to accomplish the above tasks in a cost-effective manner. It does little good to prevent abuses if doing so means intruding into the firm's decisions to a suffocating degree, or expending vast resources on regulation. As a practical matter, the resources made available to regulators may limit their ability to engage even in the efficient degree of oversight. The FCC and state commissions are operating under tight budgetary and personnel constraints that may not be commensurate with their responsibilities: the new Act has vastly increased the FCC's duties, and state commissions must grapple also with the rapidly changing electric utility industry.

2. Existing vs. new arrangements

- Assuring equal access to BOC local networks—for both long-distance carriers and local competitors—in the face of reduced BOC incentives to cooperate requires policing against sins of commission and omission: a BOC might attempt to reduce cooperation from existing levels by degrading existing access arrangements, or fail to provide a greater level of cooperation as it should in establishing new arrangements
- 135. It is difficult for regulators to eliminate entirely even sins of commission—the degradation of existing arrangements ⁵⁴ Nevertheless, once arrangements are in place and there is some track record against which to benchmark "good behavior," preventing access discrimination becomes much more manageable.
- 136. Conversely, enforcing the implementation of new arrangements is much harder. It is particularly difficult to prevent such sins of omission, since there are no good historical benchmarks to guide what is feasible for the firm. Implementing the new Act's local-competition requirements

For example, requiring a BOC to meet "objective" performance measures such as average provisioning intervals is not a perfect safeguard. A BOC could discriminate while showing identical average intervals for its affiliates and outsiders, because the same average can conceal important variations: when it is very important for an IXC to get rapid service the BOC can delay it, while meeting the overall average requirement by providing expeditious service when the IXC least needs it

a LEC does business. For example, loop unbundling will require physical (not just electronic) changes. And new electronic interfaces will be needed to coordinate ordering, billing and other functions for carriers that resell a BOC's local service. With reduced incentives to cooperate once allowed into long distance, a BOC could delay such arrangements considerably. It may initially refuse to provide a new arrangement, citing prohibitive costs; then relent and "merely" delay or give priority to requests from its affiliate to place it at a competitive advantage. The point is not that such excuses are never true, but that it will be difficult for regulators to discern which are true and which are not.

B. Enforcing Existing Access Arrangements

- 137. By and large, the U.S experience with participation by regulated LECs in long-distance markets suggests that once access arrangements for competitors are established, subsequent problems become much more manageable. To cite a recent example, IXCs have made substantial inroads competing for intraLATA toll services in states such as Minnesota and Alaska that had implemented intraLATA dialing parity prior to the 1996 Act. I am not aware of backsliding by LECs on providing such dialing parity.
- It is of course possible that we have yet to see the full arsenal of incumbent responses, intraLATA dialing parity is a recent phenomenon and incumbents may still be mulling their options. However, certain LECs such as Rochester Telephone (which is part of Frontier), United (which is part of Sprint) and Lincoln Telephone were not subject to the MFJ and have offered long-distance (interLATA) services in competition with IXCs for some time. I understand that IXCs have made few complaints against these LECs about degradation of existing access arrangements.
- 139. More recently, Sprint has owned Centel in Nevada since 1992, yet IXCs have made no significant complaints to Nevada regulators. Southern New England Telephone Company (SNET) has begun offering interLATA service jointly with its local service, so has GTE since the passage of the Act (which ended the consent decree that prevented GTE's local operating companies from jointly marketing long-distance services). GTE and SNET have been very successful in capturing long-distance business, but neither has elicited serious complaints concerning their degradation of existing long-distance access arrangements for IXCs.

140. In short the scope for a BOC, after allowed interLATA entry, to degrade existing access arrangements used by IXCs is relatively limited in the short run. Most importantly, regulatory and antitrust safeguards can do a far better job of enforcing such existing access arrangements given the long track record of experience with them. In addition, a BOC would face some technical difficulties today in finely targeting for discrimination only pieces of the network that serve IXCs or their customers. Finally, some of the markets which the BOCs are said to target if allowed interLATA entry, low- to medium-volume residential and business customers, are also ones where IXCs require relatively simpler access arrangements. 55

C. Implementing New Access Arrangements

I. IntraLATA toll dialing parity

The main long-distance markets in which the BOCs have participated since the MFJ are those for intrastate, intraLATA toll services. Dialing parity—the ability to reach a carrier other than the LEC without dialing additional digits—is very important to subscribers who must dial manually, such as most residential subscribers and small businesses lacking a PBX. Indeed, LECs consistently opposed dialing parity on the grounds that implementing it would cause them to lose massive amounts of traffic. Until a few years ago, no BOC provided dialing parity anywhere. Often regulators did not seek to enforce dialing parity (partly on grounds of protecting this LEC revenue in order to support cross-subsidies of other services such as basic residential access and most services in rural areas). But even where they did, incumbents successfully delayed the process through protracted appeals 142. The case of Minnesota is instructive ⁵⁶ The Public Utilities Commission (PUC) determined in October 1985 that dialing parity to IXCs for intraLATA toll calls (through "1+ presubscription")

About 80% of LECs' interstate access revenues comes from switched traffic (Table 1, note 6), where access arrangements are largely standardized. Dedicated access is used mainly by large customers, and competition from CAPs and CLECs is developing faster for such dedicated arrangements. However, if local competition fails to develop for broader segments of the market, the BOCs if allowed into long-distance could pose a growing threat to access arrangements used by IXCs: new arrangements will become increasingly necessary, and local networks might be re-configured to permit more subtle forms of access discrimination.

The ensuing discussion draws on Cornell (1994), and on interviews conducted by the Department of Justice. My purpose here is not to single out the Minnesota Public Utilities Commission or the incumbent BOC, U S West, but to illustrate generic problems.

was in the public interest, and in November 1987 created a committee to develop an implementation schedule and a means of paying the costs of presubscription. U S West, the incumbent BOC, asked the PUC to reconsider its public interest finding, but was denied in January 1988. In June 1989 the study committee filed a report stating that presubscription could be done and proposing a method of implementation and funding.

143. In September, 1992, U.S. West again petitioned the PUC essentially to reconsider its decision that presubscription was in the public interest. The PUC denied the request but reconvened the study committee, having decided that the earlier report might be outdated. The committee submitted an updated report in August, 1993. In July, 1994, the PUC set implementation guidelines for intraLATA equal access by incumbent LECs not already providing it. After further unsuccessful efforts by U.S. West to challenge the PUC's order in court, intraLATA presubscription was finally implemented in February 1996—over a decade after the PUC had determined that it was in the public interest

This episode, and others like it, are all the more striking given that claims challenging the technical feasibility of dialing parity had long been refuted. In exchanges serving most traffic in Alaska dialing parity was implemented in 1991-92. GTE implemented a comparable capability for itself in Hawaii in 1986; but only in July 1996 did the Hawaii PUC compel it to provide intraLATA dialing parity to others. Thus, technological uncertainty is not the sole problem, incumbents have considerable ability to stall the process through regulatory and legal challenges ⁵⁷

2. "Open Network Architecture"

One of the toughest challenges to meeting the new Act's local competition requirements will be in assuring competitors access to unbundled network elements. The FCC's experience with attempting to implement Open Network Architecture (ONA), while different in some respects, nevertheless is instructive. 58

The BOCs continue to resist intraLATA dialing parity today. For example, in states such as Michigan and Wisconsin where commissions have ordered such parity, Ameritech has mounted numerous regulatory and legal challenges. Technical barriers are sometimes cited; however, Michigan regulators found that 82% of Ameritech switches could be converted immediately, while the remaining ones would require only some software development.

A summary of the main episodes in the history of ONA and the relevant references can be found in the decision California v. FCC, 39 F.3d, 919 (9th Cir. 1994)

- 146. The FCC's Computer II rules (1980) allowed BOCs to offer unregulated enhanced services (such as computerized data processing that also require access to telephone networks) only through separate subsidiaries, in part to help prevent access discrimination to telephone networks against competing enhanced service providers. Ameritech proposed an early version of ONA partly as a substitute safeguard against discrimination; by offering access to disaggregated network elements which enhanced service providers could use flexibly, ONA would reduce a BOC's ability to discriminate. Other BOCs similarly argued that ONA would void the need for the structural separation required by Computer II. The FCC concurred in Computer III (1986), it ordered the BOCs to develop plans for ONA and determined that ONA requirements would be "self-enforcing in controlling discrimination"
- 147. Backsliding from initial ONA promises began almost immediately, though much of this was not conscious discrimination but inevitable in view of the unrealistic expectations initially touted for ONA. And major, protracted controversy ensued over whether the BOCs had actually implemented the reduced version of ONA that they did promise. The FCC, while acknowledging that ONA had not been fully implemented, ruled the BOCs had nevertheless done enough to justify lifting the separate subsidiary requirement. The Ninth Circuit (1994) strongly disagreed, finding that the FCC had failed to explain how these scaled back safeguards, that fell well short of the "fundamental unbundling" originally envisioned in *Computer III*, would suffice to prevent discrimination
- There are important differences between the network unbundling envisioned in ONA and that required by the 1996 Act. We have a much clearer idea today of the services local competitors might provide and their requirements than we did then for enhanced service providers. And the technological advances needed for ONA were more pathbreaking than the measures required to implement the Act's unbundling requirements (as spelled out in the FCC's Local Competition Order). Still, ONA offers important lessons: backsliding from initial promises, whether deliberate or not, is likely, and so are disputes over the details of what has—and has not—been implemented. These lessons highlight the dangers of relying on "paper implementation" of new requirements and, to avoid protracted regulatory and legal skirmishes, the importance of authorizing a BOC's interLATA entry

only after there is enough confidence that it has indeed implemented key local competition requirements.

V. Principles for a Procompetitive Entry Standard

At the risk of oversimplification, the stylized pattern emerging from section IV is that once access arrangements are in place and there is a track record against which to benchmark "good behavior," the task of preventing access discrimination becomes much more manageable. It is very difficult, however, to impose new arrangements against the firm's will. These considerations, and the earlier analysis of the potential benefits from BOC entry, lead me to the following principles for a procompetitive BOC entry standard

A. Fully Effective Local Competition Is Not a Prerequisite

- 150 Withholding BOC entry authority until there is sufficient local competition to eliminate a BOC's market power would not be appropriate on economic grounds. Even if barring the BOCs from long distance was justified at divestiture in order to promote the nascent long-distance competition, such competition could be protected today while allowing BOC entry well before there is effective local competition.
- 151. There are now several major established long-distance carriers. Regulators today are more attuned to risks of discrimination and, importantly, long-distance access arrangements are well established. The new Act prohibits many discriminatory practices that were not specifically prohibited pre-divestiture. In addition and importantly, the Act provides for opening of the local market which over time should yield additional safeguards for long-distance competition, both by providing direct alternatives, and by offering benchmarks to assist regulators in regulating BOC conduct.
- Moreover, the development of local competition—a central goal of the Act—can itself be accelerated by authorizing BOC entry before there is effective local competition, provided that such authority is appropriately conditioned on prior BOC cooperation with local entrants. Local competition will develop sooner if the BOCs cooperate, and the BOCs should be more willing to cooperate if in so doing they secure earlier entry into long distance. This logic, I believe, is integral to the particular sequencing adopted in § 271.

153. Finally, as noted earlier, BOC entry has the potential to yield significant benefits in provision of integrated services and increased long-distance competition. Since the potential costs can be mitigated through regulatory, antitrust and other safeguards once the market is open and benchmarks are in place, coupled with some local competition, the value of attaining earlier the benefits of BOC entry reinforces the case for approving such entry well before effective local competition is in place.

B. The Local Market Must Be Irreversibly Open to Competition

154. While section IV showed that regulators can do a reasonable job of preserving established arrangements, it also raised significant doubts about their ability to expeditiously enforce new arrangements in the face of BOC resistance. This is particularly an issue for the new local-competition arrangements required by the Act, many of which entail radical departures from past practice. Given the pivotal role of these arrangements in laying the foundation for local competition as envisioned in the Act, and that local competition holds the key to achieving the Act's goals, I believe that BOC entry should be authorized only once there is sufficient confidence that the BOC's local market has been irreversibly opened to competition through all three entry modes contemplated by the Act. Several steps, discussed next, lead to this conclusion.

1. BOC incentives to cooperate can make a great difference

The BOCs themselves seem quite aware of their latitude, within the regulatory and legislative constraints, to affect the pace and efficacy of the process to open up local markets to competition. The importance of BOC cooperation is illustrated by contrasting the experiences of intraLATA toll versus interLATA markets. BOCs successfully delayed implementation of dialing parity for intraLATA toll markets, where they were allowed to compete. In contrast, establishing the physical and administrative arrangements for equal access to IXCs after divestiture was a considerable achievement for the industry; and it was made possible in large part by BOCs' willingness to cooperate given that they were barred from directly participating in long distance and thus had strong interests in ensuring efficient operation of the exchange access business.

2. Importance of securing BOC cooperation before authorizing entry

156. As explained previously, relying on penalty threats to force implementation of new systems is problematic, because enforcers will have far less information than the BOC about how long the

process should take. Providing a BOC with incentives to act faster—by authorizing its entry only once sufficient implementation has occurred—will accomplish the process more quickly and more efficiently. Once these main new technical and organizational access arrangements for local competition are in place and shown to be working, they can establish performance benchmarks to assist enforcers in preventing future backsliding. That is, pre-entry implementation of the new systems makes regulatory and other safeguards considerably more effective and less burdensome. 157. On the other hand, once entry is authorized, BOC incentives to continue cooperating will diminish significantly. As a practical matter, rescinding a BOC's long-distance authority would be difficult and, in any event, would be disruptive. While freezing a BOC's future marketing authority would be a more practical option, it also is less potent. Faced with a loss of an important incentive mechanism—the § 271 entry authority—BOC cooperation would have to be induced by threatening penalties which, as noted, are less effective when the issue is implementation of new measures. Thus, it is important to grant BOC entry only after sufficient cooperation has first been secured

3. The benefits from delayed BOC entry outweigh the costs

158. The Department of Justice's standard would involve some delay in BOC entry relative to adopting an "early" entry standard that required only checklist compliance on paper. This will impose non-trivial costs, by temporarily depriving consumers of increased availability of integrated services, as well as increased competition in long-distance services (see section II) But the costs of delay are outweighed by the prospective benefits

a. Local versus long-distance markets

A BOC's local markets are about twice as large as its in-region long-distance markets. In addition, the local market is a regulated monopoly, with substantial room for improvement in performance. In contrast long-distance markets, though not perfectly competitive, exhibit considerable rivalry and are becoming more competitive even without BOC entry. The gains from injecting even a modest dose of local competition can thus easily outweigh those from adding one, albeit major, competitor into long-distance markets in a BOC's region. (Recall that BOCs already may offer long-distance service outside their regions.)

160. Aside from its inherent benefits, local competition can also help safeguard long-distance competition in the longer run. A BOC's entry into long distance is likely, over time, to pose a growing threat to the ability of IXCs to compete with it on an equal footing, or invite more intrusive regulation to prevent this, than if local competition emerged sooner. Finally, local competition holds the key to robust competition in offering integrated services—since the key monopolized pieces are local inputs and services.

b. Integrated services

- 161. "Competitive parity." The BOCs argue that any delay of their entry into long distance would give their competitors—especially the major IXCs—important and unfair first-mover advantages in competing to provide integrated services (such as offering one-stop shopping). In addition, and somewhat inconsistently, they argue that delaying BOC entry would deny consumers the benefits of these offerings which the BOCs—if allowed into long distance—would be uniquely positioned to provide. I address first the issue of competitive parity, then the more important questions of impact on consumers and on overall welfare.
- 162. In general, the competitive process works best when no artificial handicap is placed on competitors and all firms are allowed to compete on the merits. At first glance, delaying BOC entry while IXCs and others make inroads into local markets may seem to violate this principle of respecting competitive parity in offering integrated services. This, however, overlooks the fundamental asymmetry in the position of a BOC versus other players.
- 163. The BOC is the sole major source of local services in its region. In contrast, there are several national and many regional facilities-based providers of long-distance services. If reciprocal entry is allowed concurrently—that is, if BOC entry into long distance is allowed immediately—the BOCs will have a major and artificial advantage in offering integrated services. They will be able to obtain long-distance services rapidly, seamlessly, and at prices very close to cost—because of the vigorous competition among IXCs vying to sell such services to a large wholesale customer as the BOC. In contrast, other would-be providers of integrated services have only one major source for local services the BOC. Once allowed into long distance, a BOC would have strong incentives to deny to others the various wholesale local services they need to offer integrated services. Potential